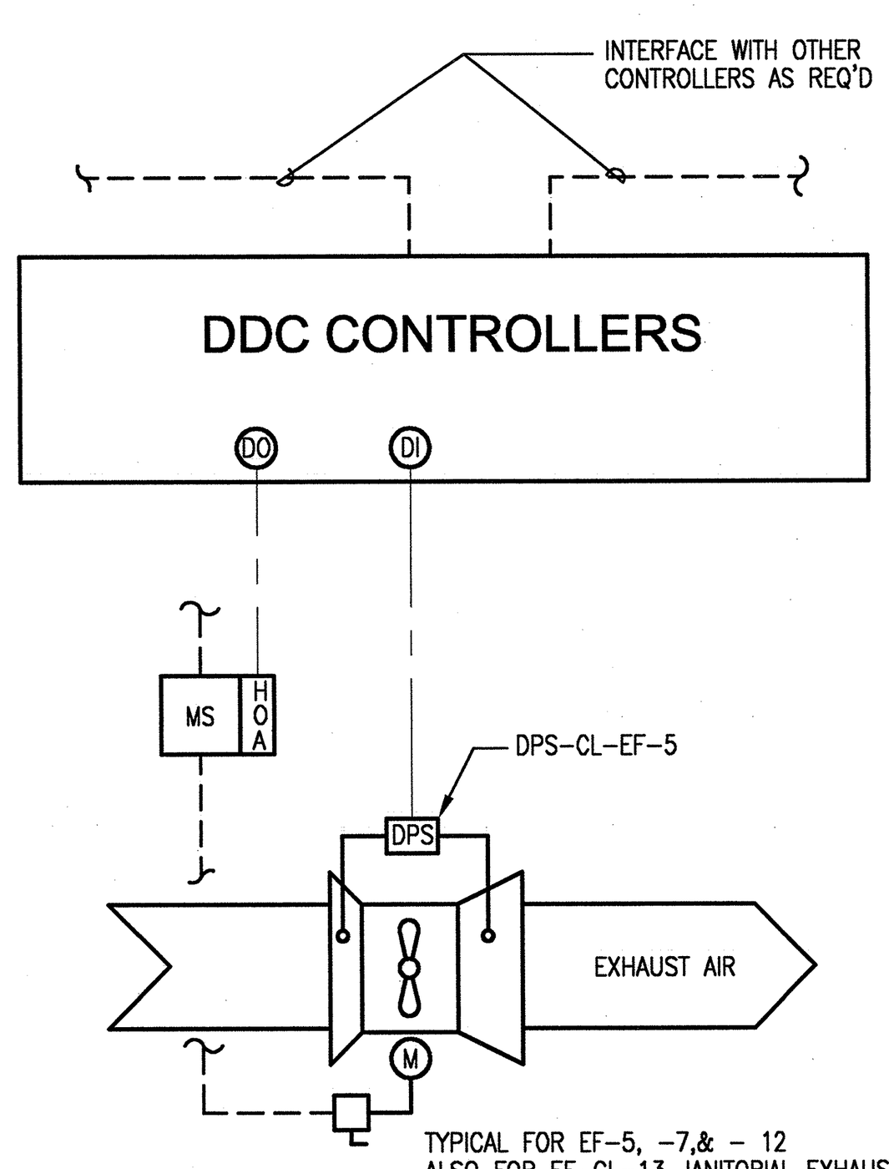
CONTROL POINT LIST - MISCELLANEOUS CONTROL

CENTRAL LAB OFFICE BUILDING

POINT DESCRIPTION	GRAPHIC DISPLAY (WINDOWS BASED SOFTWARE)	CONNECTED POINTS – OUTPUT – DIGITAL: CONTROL RELAY	HANDS/OFF/AUTO	START/STOP	OUTPUT – ANALOG: CONTROL POINT ADJUSTMENT	PROPORTIONAL CONTROL	OPEN / CLOSE	INPUT – DIGITAL:	PULSE	DIFFERENTIAL PRES. SWITCH	PRESSURE SWITCH	AUXILIARY CONTACT	GENERAL ALARM	INPUT – ANALOG: TEMPERATURE (F)	% RELATIVE HUMIDITY	PSIG, PSIA, PSID	POSITION SENSOR	FLOW	SOFTWARE – ALARMS – DIGITAL: CONTACT CLOSURE			ALARMS – ANALOG: HIGH LIMIT	LOW LIMIT	RUN TIME		APPLICATIONS: DUTY CYCLING	START / STOP	ECONOMIZER OFF/AUTO	REHEAT COIL RESET	LEAD / LAG	CHILLED WATER RESET	FAILURE MODE
FAN COIL UNITS	X																															
START/STOP				X																												
STATUS										X																						
HOT WATER CONTROL VALVE						X																										
CHILLED WATER CONTROL VALVE						X																										
SPACE TEMPERATURE														X																		
EXHAUST FAN	X																															
START/STOP				X																												
STATUS										X																						

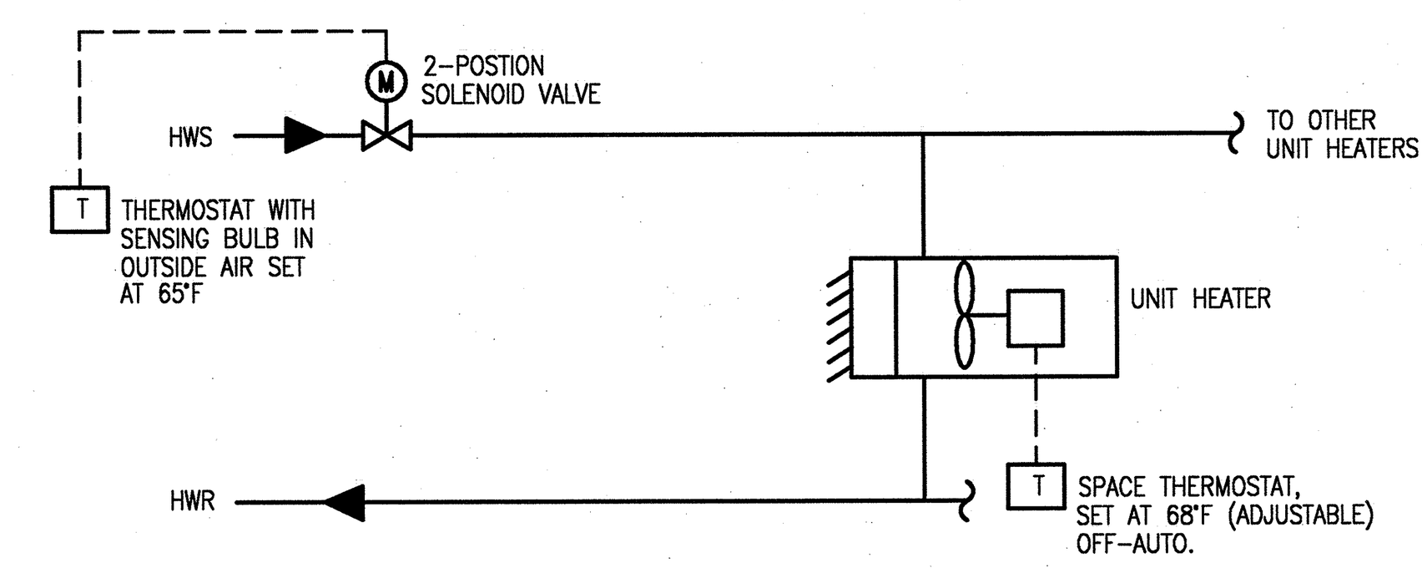


TYPICAL FOR EF-5, -7,& - 12
ALSO FOR EF-CL-13 JANITORIAL EXHAUST

SEQUENCE OF OPERATION

GENERAL: EXHAUST FANS SHALL BE ENERGDED THROUGH THE DDC CONTROL SYSTEM AND SHALL RUN CONTINUOUSLY. FAN OPERATING STATUS, AS ESTABLISHED BY A DIFFERENTIAL PRESSURE SWITCH, SHALL BE REPORTED AT THE DDC CENTRAL CONTROL STATION.

TYPICAL TOILET EXHAUST FAN CONTROL



SEQUENCE OF OPERATION

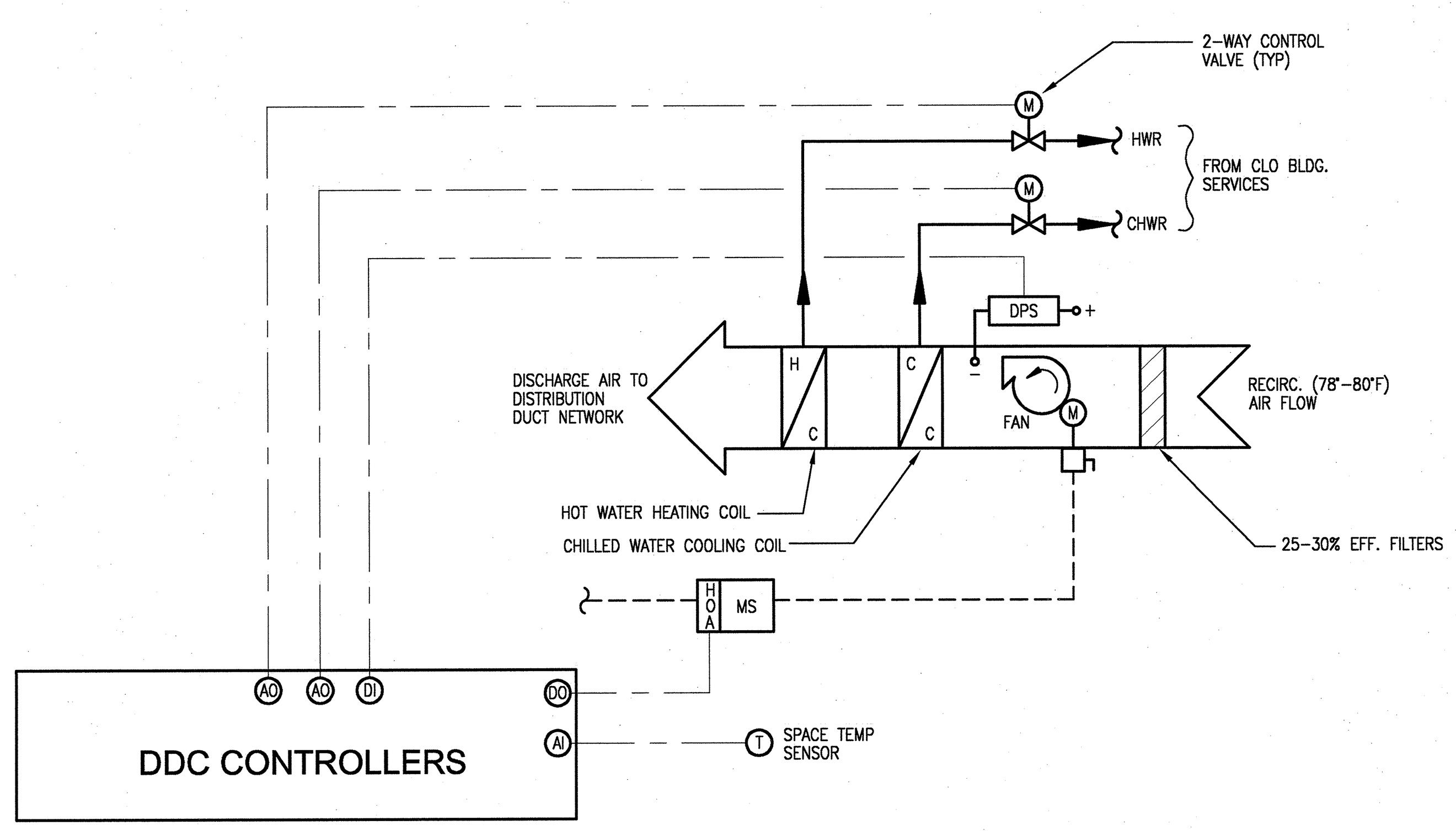
UNIT HEATER TEMPERATURE CONTROL

THIS SYSTEM CONSISTS OF A UNIT HEATER WITH A HEATING COIL WHICH CIRCULATES AIR THROUGH A COIL TO PROVIDE HEAT TO THE SPACE SERVED. THE HEATING COIL MEDIUM IS UNCONTROLLED (NO VALVE).

SPACE THERMOSTAT HAS A MANUAL "OFF-AUTO" SWITCH. WHEN THE SWITCH IS INDEXED TO "OFF", THE UNIT HEATER FAN MOTOR IS DE-ENERGIZED. WHEN THE SWITCH IS INDEXED TO "AUTO", THE FAN STARTS WHEN THE SPACE TEMPERATURE FALLS BELOW THE THERMOSTAT SETPOINT.

A SINGLE THERMOSTAT WITH SENSING BULB IN THE OUTSIDE AIR SHALL CLOSE THE TWO POSTION SOLENOID VALVE ON THE HWS LINE SERVING ALL UNIT HEATERS.

TYPICAL UNIT HEATER CONTROL



TYPICAL FOR 16 SYSTEMS: FCU-CL-001 THRU -008
FCU-CL-201 THRU -208

SEQUENCE OF OPERATION

GENERAL: THE FAN COIL UNITS SHALL BE ENERGDED THROUGH THE DDC CONTROL SYSTEM AND SHALL RUN CONTINUOUSLY. FAN OPERATING STATUS, AS ESTABLISHED BY A DIFFERENTIAL PRESSURE SWITCH, SHALL BE REPORTED AT THE DDCACENTRAL CONTROL STATION.

TEMPERATURE CONTROL: A SPACE TEMPERATURE SENSOR SHALL PROVIDE INPUT TO THE DDC CONTROL SYSTEM. THE DDC CONTROL SYSTEM SAHLL MODULATE THE HOT WATER AND CHILLED WATER, 2-WAY CONTROL VALVES AS REQUIRED TO MAINTAIN THE DESIRED SPACE TEMPERATURE.

TYPICAL FAN-COIL CONTROL DIAGRAM

NO SCALE

SECTION AND DETAIL KEY: NUMBER OF SECTION OR DETAIL — DRAWING ON WHICH SECTION OR DETAIL IS SHOWN OR TAKEN

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM 4
ENGINEERING PROCEDURE SNS-ENG-G001

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION	DSN	CHK	DEPT	DATE	PE	DATE	PJ	DATE	REQ	DATE	UTB	DATE	RPE	RPE NO	DATE
0				CERTIFIED FOR CONSTRUCTION - MAY 15, 2001	RTW	KJH				10/1/01		8/21/01				10/8/01	BWJ	105869	5/14/01

REVISION OR ISSUE PURPOSE — REVISION APPROVALS

ST	CV	EC	EE	EM	IE	M	PD	SE	AR
SC	AW	WRS	RL	WRS	BWJ	--	WRS	--	WAS

SQUAD CHECK

RPE: BRUCE W. JOHNSON, REGISTERED ENGINEER, AGRICULTURE, COMMERCE, No. 00105869, STATE OF TENNESSEE
REV. 0 DATE 5/14/01

DSN	S. VERECZEY	05/15/01
DRW	M. THAW	05/15/01
CHK	B. JOHNSON	05/15/01
DEPT		
PE		10/1/01
PJ		8/21/01
REQ		
UTB		10/8/01

DRAWING APPROVALS

108031400-H8E-8600-A106

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Oak Ridge National Laboratory
managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725
UT-BATTELLE, LLC, Oak Ridge, Tennessee

PROJECT NAME:
SPALLATION NEUTRON SOURCE

CENTRAL LAB AND OFFICE BUILDING
HVAC-MISCALLENEOUS CONTROLS
FAN-COIL, FIN-TUBE, EXH.FAN CONTROLS

1	48	49	50	PLANT	BLDG	FL	SH.	OF	TYPE	CLASS
3	H	X	X	8	8600		1	1	D	U

51	52	53	WBS		REV
NC	NA		1.8.3.14	H8.10.48	0

AutoCAD